



U.S. Fish & Wildlife Service

Peregrine Falcon

(*Falco peregrinus*)

The peregrine falcon is one of nature's swiftest and most beautiful birds of prey. Its name comes from the Latin word peregrinus, meaning "foreigner" or "traveler." This impressive bird has long been noted for its speed, grace, and aerial skills. Now, it is also a symbol of America's recovering threatened and endangered species.

Three subspecies of the peregrine falcon inhabit North America: the American (*Falco peregrinus anatum*), Arctic (*Falco peregrinus tundrius*), and Peale's (*Falco peregrinus pealei*). Peregrine falcons are roughly crow-sized—about 15 to 21 inches long—with a wingspan of about 40 inches. As with many raptors, or birds of prey, females are larger than males. Adults have slate blue-gray wings and backs barred with black; pale undersides; white faces with a black stripe on each cheek; and large, dark eyes. Younger birds are darker below and browner.

Peregrine falcons live mostly along mountain ranges, river valleys, and

coastlines. Historically, they were most common in parts of the Appalachian Mountains and nearby valleys from New England south to Georgia, the upper Mississippi River Valley, and the Rocky Mountains. Peregrines also inhabited mountain ranges and islands along the Pacific Coast from Mexico north to Alaska and in the Arctic tundra.

The peregrine falcon also is found in other parts of the world. Most peregrines from northern Alaska, Canada, and Greenland migrate in the fall to Central and South America. On the way, they often hunt



along the barrier islands on the Atlantic and Gulf of Mexico coasts. Peregrines that nest south of Canada migrate lesser distances, and some do not migrate at all.

Peregrine falcons generally reach breeding maturity at 2 years of age. Usually, the male arrives at a nesting site and begins a series of aerial acrobatic displays to attract a mate. An average clutch of four eggs is laid in the spring, hatching about a month later. Peregrines vigorously defend their nests, although they may abandon them if severely or continuously harassed.

The nest is a scrape or depression dug in gravel on a cliff ledge. Rarely, peregrines will nest in a tree cavity or an old stick nest. Some peregrines have readily accepted manmade structures as breeding sites. For example, skyscraper ledges, tall towers, and bridges serve as the urban equivalent of a cliff ledge. In 1988, 21 nesting pairs of peregrines in various urban areas throughout North America successfully fledged more than 40 young.

Peregrine falcons feed primarily on other birds, such as songbirds, shorebirds, ducks, and—in urban areas—starlings and pigeons. Flying high above their intended prey, peregrines will “stoop” or dive and strike in mid-air, killing the prey with a sharp blow. Scientists estimate the speed of a diving peregrine to be more than 200 miles per hour.

Peregrine falcons have never been very abundant. Studies in the 1930s and 1940s estimated that there were about 500 breeding pairs of peregrine falcons in the eastern United States and about 1,000 pairs in the West and Mexico. Then, beginning in the late 1940s, peregrine falcons suffered a devastating and rapid decline. By the mid-1960s, the species had been eliminated from nearly all of the eastern U.S. Although less severe, the decline spread west, where peregrine populations were reduced by 80 to 90 percent by the mid-1970s. At that time, only the populations of Peale’s falcons nesting along the north Pacific Coast in Alaska and British Columbia appeared to be stable.

Scientists at the U.S. Fish and Wildlife Service’s Patuxent Wildlife Research Center near Laurel, Maryland, began investigating the peregrine’s decline. They found unusually high

concentrations of the pesticide DDT and its breakdown product DDE in peregrine falcons and other birds of prey. The peregrines accumulated DDT in their tissues by feeding on birds that had eaten DDT-contaminated insects or seeds. The toxic chemical interfered with eggshell formation. As a result, falcons laid eggs with shells so thin they often broke during incubation or otherwise failed to hatch. Because too few young were raised to replace adults that died, peregrine populations declined precipitously.

In 1970, the American and Arctic peregrine falcon subspecies were listed as endangered under the Endangered Species Conservation Act of 1969 (the law preceding the Endangered Species Act of 1973), reflecting their critical biological status. Because DDT and other pesticides were not used in the areas where Peale’s peregrines live, these falcons declined to a lesser degree and were not listed. In addition, Peale’s peregrines were not susceptible to picking up DDT in other areas because they do not migrate and feed largely on non-migratory prey.

In 1972, under the authorities granted by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the Environmental Protection Agency (EPA) banned DDT for most uses in the U.S. However, DDE residues are still found in some areas of the country and DDT continues to be used in many Latin American countries where some peregrines and prey spend the winter.

The Fish and Wildlife Service established peregrine falcon recovery teams composed of Federal, state, and independent biologists to recommend actions necessary to restore peregrines in the U.S. As part of recovery efforts, scientists at Cornell University successfully bred and raised peregrine falcons in captivity.

Under a cooperative effort among the Fish and Wildlife Service, state wildlife agencies, The Peregrine Fund, Santa Cruz Predatory Bird Research Group, and the Midwestern Peregrine Falcon Restoration Project, more than 6,000 American peregrines have been released since 1974. Large-scale reintroductions of peregrines have ceased due to the peregrine’s recovery, and relatively few reintroductions are still taking place in the United States.

To release captive-bred peregrines, young birds are placed in specially equipped boxes on top of a manmade tower or cliff ledge. At first, the birds are fed through a chute so they cannot see their human benefactors. When they are old enough, the box is opened and the young peregrines begin testing their wings. Their food is gradually reduced as the young falcons learn to hunt on their own. This process is known as “hacking.”

Arctic peregrine falcons declined by as much as 80 percent; however, enough survived the impacts of pesticides that releases of captive-bred young were not necessary. Following EPA’s restrictions on the use of DDT and recovery efforts under the Endangered Species Act, Arctic peregrine numbers increased to the point that the subspecies was reclassified in 1984 from endangered to the less critical category of threatened. Then, in October 1994, the Fish and Wildlife Service announced that the Arctic peregrine falcon had increased in numbers to the point that this subspecies no longer needed Endangered Species Act protection and could safely be removed from the threatened and endangered species list. There are now thousands of Arctic peregrines in North America, and the majority of peregrines on the continent belong to this subspecies.

Populations of peregrine falcons are now estimated at 1,650 breeding pairs in the U.S. and Canada, with additional birds in Mexico. In August 1999, the Fish and Wildlife Service removed the American peregrine falcon from the list of endangered and threatened species, marking one of the most dramatic successes of the Endangered Species Act.

The protection afforded by the Endangered Species Act, EPA’s use of their authorities under FIFRA to severely restrict the use of DDT, and the reintroduction of captive-bred chicks have rescued the peregrine falcon from extinction. A cleaner environment and the success of cooperative recovery efforts provide great promise of a bright future for the peregrine falcon in North America.

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September 1999